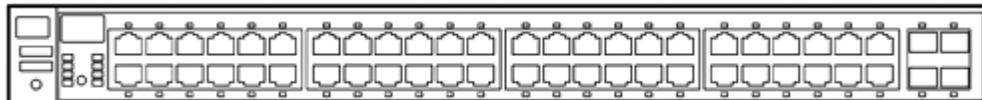
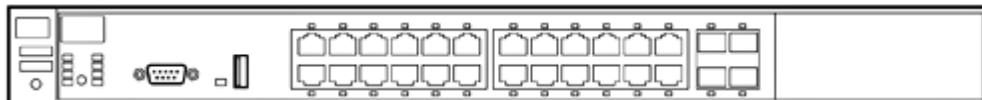


Overview

ProCurve Switch 2900-24G



ProCurve Switch 2900-48G



Models

ProCurve Switch 2900-24G

J9049A

ProCurve Switch 2900-48G

J9050A

Introduction

The ProCurve Switch 2900 series consists of two switches: the ProCurve Switch 2900-24G with 24 10/100/1000 ports and the ProCurve Switch 2900-48G with 48 10/100/1000 ports. Both have 4 dual-personality ports for 10/100/1000 or mini-GBIC connectivity. In addition, by including four integrated 10-Gigabit Ethernet (two CX4 ports and two X2 slots), the 2900 series offers the most flexible and easy-to-deploy multiple 10-Gigabit stacking and uplinks in its class. Together with IP static & RIP routing, robust security and management features, free lifetime warranty, and free software updates, the 2900 series is a cost-effective, future-proof solution for customers who are building high-performance networks.

Features and Benefits

Performance

- **High-performance architecture:** 115 Gbps switching fabric with up to 74 million pps (Switch 2900-24G) and 173 Gbps switching fabric with up to 110 million pps (Switch 2900-48G)
- **Selectable queue configurations:** increase performance by selecting the number of queues and associated memory buffer that best meet the requirements of network applications.

Connectivity

- **Plug-n-Play 10-Gbps Ethernet for stacking and uplink:** four integrated 10-GbE ports (two CX4 and two X2) built-in on the switch
- **Dual-personality functionality:** four 10/100/1000 ports or mini-GBIC slots for optional fiber connectivity such as Gigabit-SX, -LX, or -LH
- **Stacking capability:** single IP address management for a virtual stack of up to 16 switches, including the ProCurve 2500 series, 2510 series, 2600 series, 2800 series, 2810 series, 2900 series, 3400cl series, 3500yl series, 4100gl series, 4200vl series, 6108, 6200yl-24G-mGBIC, and 6400cl series
- **IPv6 ready:** the switch hardware is capable of supporting IPv6, but IPv6 operation and deployment are not available until enabled via a software update at a later date
- **ProCurve/IEEE Auto-MDIx:** automatically adjusts for straight-through or crossover cables on all 10/100/1000 ports

Resiliency and high availability

- **IEEE 802.3ad Link Aggregation Protocol (LACP) and ProCurve trunking:** support up to 24 trunks, each with up to 8 links (ports) per trunk

Overview

- **IEEE 802.1s Multiple Spanning Tree:** provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w

Layer 3 routing

- **Layer 3 Routing:**
 - **Static IP routing** provides basic routing
 - **RIP** provides RIPv1 and RIPv2 routing

Layer 2 switching

- **VLAN support and tagging:** support complete IEEE 802.1Q (4,096 VLAN IDs) and 256 VLANs simultaneously
- **GARP VLAN Registration Protocol:** allows automatic learning and dynamic assignment of VLANs
- **Jumbo frames:** on Gigabit and 10-Gigabit ports, allow high-performance remote backup and disaster-recovery services

Security

- **Port security:** allows access only to specified MAC addresses, which can be learned or specified by the administrator
- **MAC address lockout:** prevents configured particular MAC addresses from connecting to the network
- **Multiple user authentication methods:**
 - **IEEE 802.1X:** industry-standard way of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
 - **Web-based authentication:** similar to IEEE 802.1X, provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant
 - **MAC-based authentication:** client is authenticated with the RADIUS server based on the MAC address of the client
- **Authentication flexibility:**
 - **Multiple IEEE 802.1X users per port** provides authentication of up to 8 IEEE 802.1X users per port; prevents user "piggybacking" on another user's IEEE 802.1X authentication
 - **Concurrent IEEE 802.1X and Web or MAC authentication schemes per port** switch port will accept any of IEEE 802.1X and either Web or MAC authentications
- **BPDU port protection:** blocks Bridge Protocol Data Unit (BPDU) on ports that do not require BPDU, preventing forged BPDU attack
- **Source-port filtering:** allows only specified ports to communicate with each other
- **Secure FTP:** allows secure file transfer to/from the switch; protects against unwanted file downloads or unauthorized copying of switch configuration file
- **TACACS+:** eases switch management security administration by using a password authentication server
- **Secure Shell (SSHv2):** encrypts all transmitted data for secure, remote command-line interface (CLI) access over IP networks
- **Secure Sockets Layer (SSL):** encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- **Switch management logon security:** can require either RADIUS or TACACS+ authentication for secure switch CLI logon
- **Custom banner:** displays security policy when users log in to the switch

Quality of Service (QoS)

- **Traffic prioritization (IEEE 802.1p):** allows real-time traffic classification into 8 priority levels mapped to 4 queues
- **Class of Service (CoS):** sets IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), L3 protocol, TCP/UDP port number, source port, and DiffServ
- **Layer 4 prioritization:** enables prioritization based on TCP/UDP port numbers

Management

- **Port mirroring:** enables traffic on a port to be simultaneously sent to a network analyzer for monitoring
- **sFlow (RFC 3176):** provides scalable, ASIC-based, wire-speed network monitoring and accounting with no impact on network performance; this allows network operators to gather a variety of sophisticated network statistics and information for capacity planning and real-time network monitoring purposes

Overview

- **IEEE 802.1ab LLDP discovery:** advertises and receives management information from adjacent devices on a network
- **RMON and XRMON:** provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- **Command authorization:** leverages RADIUS to link a custom list of CLI commands to individual network administrator's login; also provides audit trail
- **Friendly port names:** allow assignment of descriptive names to ports
- **Dual flash images:** provide independent primary and secondary OS files for backup while upgrading
- **Find-Fix-and-Inform:** finds and fixes common network problems automatically, then informs administrator
- **Uni-Directional Link Detection (UDLD):** monitors a link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices

Convergence

- **IP multicast snooping** (data-driven IGMP): automatically prevents flooding of IP multicast traffic
- **iSCSI support:** enables the deployment of Ethernet storage area network solutions using the iSCSI standard
- **LLDP-MED (Media Endpoint Discovery):** a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- **Software updates:** free downloads from the Web

Warranty Information

- **Warranty:** Lifetime warranty: for as long as you own the product, with next-business-day advance replacement (available in most countries)

Services

ProCurve Switch 2900-24G	3-year, 4-hour onsite, 13x5 coverage for hardware	U2855E
	3-year, 4-hour onsite, 24x7 coverage for hardware	U2856E
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support	U6304E
	Installation with minimum configuration, system-based pricing	U4826E
	Installation with HP-provided configuration, system-based pricing	U4830E
ProCurve Switch 2900-48G	3-year, 4-hour onsite, 13x5 coverage for hardware	H4496E
	3-year, 4-hour onsite, 24x7 coverage for hardware	H2893E
	3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support	U6319E
	Installation with minimum configuration, system-based pricing	U4826E
	Installation with HP-provided configuration, system-based pricing	U4830E

Check <http://www.hp.com/go/procureservices> for part numbers and service-level descriptions. For details about services and response times in your area, please contact your local HP sales office.

Technical Specifications

ProCurve Switch 2900-24G (J9049A)	Ports	20 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab 1000Base-T Gigabit Ethernet) 2 CX4 10-GbE ports 2 X2 ports 1 RS-232C DB-9 console port 4 dual-personality ports - each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or an open mini-GBIC slot (for use with mini-GBIC transceivers)
	Power supplies	Physical characteristics
		Dimensions (DxWxH) 15.43 x 17.44 x 1.73 in. (39.2 x 44.3 x 4.4 cm) (1U height)
		Weight 14.11 lb. (6.3 kg)
	Memory and processor	Processor type and speed Freescale PowerPC 8540 @ 667 MHz
		Packet buffer size 13.5 MB
		Flash capacity 4 MB
	Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only.
	Performance	Latency 1000 Mb <3.7 is (FIFO 64-byte packets) Latency 10 Gbps <2.1 is (FIFO 64-byte packets) Throughput Up to 74 million pps (64-byte packets) Routing/swapping capacity 101 Gbps Switching capacity 115 Gbps
	Environment	Operating temperature 32°F to 131°F (0°C to 55°C); 32°F to 104°F (40°C) when using any X2 optics or transceiver Operating relative humidity 15% to 95% @ 104°F (40°C), non-condensing Non-operating/storage temperature -40°F to 158°F (-40°C to 70°C) Non-operating/storage relative humidity 15% to 90% @ 149°F (65°C), non-condensing Altitude up to 15,091 ft.(4.6 km) Acoustic DIN 45635T.19 per ISO 7779 49.3 dB
	Electrical characteristics	Description The switch automatically adjusts to any voltage between 100-127 and 200-240 volts and either 50 or 60 Hz Maximum heat dissipation 683 BTU/hr (720.57 kJ/hr) Voltage 100-127 VAC/200-240 VAC Current 4.0 A/2.0 A Power consumption 200 W Frequency 50/60 Hz
	Safety	CSA 22.2 No. 60950; UL 60950; IEC60950; EN60950

Technical Specifications

Emissions	FCC Class A; EN55022/CISPR-22 Class A; VCCI Class A
Immunity	
EN	EN55024, CISPR 24
ESD	IEC 61000-4-2; 4kV CD, 8 kV AD
Radiated	IEC 61000-4-3; 3V/m
EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
Surge	IEC 61000-4-5; 1 kV/2 kV AC
Conducted	IEC 61000-4-6; 3V
Power frequency magnetic field	IEC 61000-4-8; 1A/m, 50 or 60 Hz
Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
Harmonics	IEC 61000-3-2; IEC61000-3-2
Flicker	IEC 61000-3-3; IEC61000-3-3
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)
Standards and protocols	RFC 783 TFTP; RFC 951 BootP; RFC 854 Telnet; RFC 768 UDP; RFC 792 ICMP; RFC 793 TCP; RFC 826 ARP; RFC 2030 SNTP; IEEE 802.3x Flow Control; DHCP Relay; RFC 3046 DHCP Relay Agent Information Option 82; RFC 3376 IGMPv1/v2/v3; RFC 2453 RIPv2; IEEE 802.1D Spanning Tree; IEEE 802.1w Rapid Convergence Spanning Tree; IEEE 802.1s Multiple Spanning Trees; IEEE 802.3ad Link Aggregation Control Protocol; IEEE 802.1AB Link Layer Discovery Protocol; ANSI/TIA-1057 LLDP Media Endpoint Discovery (MED); RFC 2474 DiffServ Precedence; RFC 2597 DiffServ Expedited Forwarding (EF); RFC 2598 DiffServ Assured Forwarding (AF); RFC 1492 TACACS+; RFC 2138 RADIUS; RFC 2866 RADIUS accounting; SSHv2 Secure Shell; Secure Sockets Layer (SSL); IEEE 802.1X Network Login; IEEE 802.1Q VLAN tagging; IEEE 802.1Q GVRP; IEEE 802.1p Priority; SNMPv1/v2c/v3; HTML and telnet management; RFC 1493 Bridge MIB; RFC 1213 MIB II; RFC 2737 Entity MIB; RFC 2863 Evolution of Interface;

Technical Specifications

	RFC 2665 Ethernet MIB; RFC 1058 RIP; RFC 1724 RIPv2 MIB; RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events); XRMON; sFlow; RFC 2021 RMON probe configuration (RMON v2); RFC 2668 802.3 MAU MIB; RFC 2613 SMON; RFC 2674 802.1p and IEEE 802.1Q Bridge MIB; RFC 2618 RADIUS Client MIB; RFC 2620 RADIUS Accounting MIB; RFC 3046 DHCP Relay Agent Information Option
Notes	One 0.5 m 10-GbE CX4 cable is included. When using mini-GBICs with this product, mini-GBICs with revision "B" (product number ends with the letter "B", e.g. J4858B, J4859B) or later are required. ProCurve 10-GbE CX4 Media Converter (J4839A) can be used only with the two fixed CX4 ports.
ProCurve Switch 2900-48G (J9050A)	<p>Ports</p> <p>44 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab 1000Base-T Gigabit Ethernet) 2 CX4 10-GbE ports 2 X2 ports 1 RS-232C DB-9 console port 4 dual-personality ports - each port can be used as either an RJ-45 10/100/1000 port (IEEE 802.3 Type 10Base-T; IEEE 802.3u Type 100Base-TX; IEEE 802.3ab 1000Base-T Gigabit Ethernet) or an open mini-GBIC slot (for use with mini-GBIC transceivers)</p> <p>Power supplies</p> <p>Physical characteristics</p> <p>Dimensions (DxWxH) 16.93 x 17.44 x 1.73 in. (43.0 x 44.3 x 4.4 cm) (1U height)</p> <p>Weight 15.43 lb. (7 kg)</p> <p>Memory and processor</p> <p>Processor type and speed Freescale PowerPC 8540 @ 667 MHz</p> <p>Packet buffer size 22.5 MB</p> <p>Flash capacity 4 MB</p> <p>Mounting</p> <p>Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only.</p> <p>Performance</p> <p>Latency 1000 Mb <3.7 µs (FIFO 64-byte packets)</p> <p>Latency 10 Gbps <2.1 µs (FIFO 64-byte packets)</p> <p>Throughput Up to 110 million pps</p> <p>Routing/switiching capacity 148 Gbps</p> <p>Switching capacity 173 Gbps</p> <p>Environment</p> <p>Operating temperature 32°F to 131°F (0°C to 55°C); 32°F to 104°F (40°C) when using any X2 optics or transceiver</p> <p>Operating relative humidity 15% to 95% @ 104°F (40°C), non-condensing</p>

Technical Specifications

Electrical characteristics	Non-operating/ storage temperature	-40°F to 158°F (-40°C to 70°C)
	Non-operating/ storage relative humidity	15% to 90% @ 149°F (65°C), non-condensing
	Altitude	up to 15,091 ft.(4.6 km)
	Acoustic	DIN 45635T.19 per ISO 7779 52 dB
	Description	The switch automatically adjusts to any voltage between 100-127 and 200-240 volts and either 50 or 60 Hz
	Maximum heat dissipation	683 BTU/hr (720.57 kJ/hr)
	Voltage	100-127 VAC/200-240 VAC
	Current	4.0 A/2.0 A
	Power consumption	200 W
	Frequency	50/60 Hz
Safety	CSA 22.2 No. 60950; UL 60950; IEC60950; EN60950	
Emissions	FCC Class A; EN55022/CISPR-22 Class A; VCCI Class A	
Immunity	EN	EN55024, CISPR 24
	ESD	IEC 61000-4-2; 4kV CD, 8 kV AD
	Radiated	IEC 61000-4-3; 3V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3V
	Power frequency magnetic field	IEC 61000-4-8; 1A/m, 50 or 60 Hz
	Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
	Harmonics	IEC 61000-3-2; IEC61000-3-2
	Flicker	IEC 61000-3-3; IEC61000-3-3
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	

Technical Specifications

Standards and protocols	RC 783 TFTP; RFC 951 BootP; RFC 854 Telnet; RFC 768 UDP; RFC 792 ICMP; RFC 793 TCP; RFC 826 ARP; RFC 2030 SNTP; IEEE 802.3x Flow Control; DHCP Relay; RFC 3046 DHCP Relay Agent Information Option 82; RFC 3376 IGMPv1/v2/v3; RFC 2453 RIPv2; IEEE 802.1D Spanning Tree; IEEE 802.1w Rapid Convergence Spanning Tree; IEEE 802.1s Multiple Spanning Trees; IEEE 802.3ad Link Aggregation Control Protocol; IEEE 802.1AB Link Layer Discovery Protocol; ANSI/TIA-1057 LLDP Media Endpoint Discovery (MED); RFC 2474 DiffServ Precedence; RFC 2597 DiffServ Expedited Forwarding (EF); RFC 2598 DiffServ Assured Forwarding (AF); RFC 1492 TACACS+; RFC 2138 RADIUS; RFC 2866 RADIUS accounting; SSHv2 Secure Shell; Secure Sockets Layer (SSL); IEEE 802.1X Network Login; IEEE 802.1Q VLAN tagging; IEEE 802.1Q GVRP; IEEE 802.1p Priority; SNMPv1/v2c/v3; HTML and telnet management; RFC 1493 Bridge MIB; RFC 1213 MIB II; RFC 2737 Entity MIB; RFC 2863 Evolution of Interface; RFC 2665 Ethernet MIB; RFC 1058 RIP; RFC 1724 RIPv2 MIB; RFC 2819 Four groups of RMON: 1 (statistics), 2 (history), 3 (alarm) and 9 (events); XRMON; sFlow; RFC 2021 RMON probe configuration (RMON v2); RFC 2668 802.3 MAU MIB; RFC 2613 SMON; RFC 2674 802.1p and IEEE 802.1Q Bridge MIB; RFC 2618 RADIUS Client MIB; RFC 2620 RADIUS Accounting MIB; RFC 3046 DHCP Relay Agent Information Option
Notes	One 0.5 m 10-GbE CX4 cable is included. When using mini-GBICs with this product, mini-GBICs with revision "B" (product number ends with the letter "B", e.g. J4858B, J4859B) or later are required. ProCurve 10-GbE CX4 Media Converter (J8439A) can be used only with the two fixed CX4 ports.

Technical Specifications

Accessory Product Details

ProCurve Gigabit-LH-LC Ports Mini-GBIC (J4860B) with one 1000Base-LH port; designed for long-distance single-mode fiber connectivity	Dimensions (D x W x H) Weight Cabling	1 1000Base-LH port (no IEEE standard exists for 1550 nm optics) Connector: LC Duplex: full 2.17 x 0.60 x 0.46 in. (5.5 x 1.53 x 1.18 cm) 0.04 lb. (0.02 kg) Type: Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1 Maximum distance: 70 km
ProCurve Gigabit-LX-LC Ports Mini-GBIC (J4859B) with one 1000Base-LX port; designed for long-distance single-mode fiber connectivity, will support multimode fiber connectivity to limited distances	Dimensions (D x W x H) Weight Cabling	1 1000Base-LX port (IEEE 802.3z Type 1000Base-LX) Connector: LC Duplex: full 2.24 x 0.54 x 0.486 in. (5.69 x 1.37 x 1.23 cm) 0.04 lb. (0.02 kg) Type: Either single mode or multimode <ul style="list-style-type: none">• 62.5/125 μm or 50/125 μm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively• Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1 Maximum distance: 10 km (single mode) or 550 m (multimode)
ProCurve Gigabit-SX-LC Ports Mini-GBIC (J4858B) with one 1000Base-SX port; designed for short-distance (<550 m max.) multimode fiber connectivity	Dimensions (D x W x H) Weight Cabling	1 1000Base-SX port (IEEE 802.3z Type 1000Base-SX) Connector: LC Duplex: full 2.24 x 0.54 x 0.486 in. (5.69 x 1.37 x 1.23 cm) 0.04 lb. (0.02 kg) Type: 62.5/125 μ m or 50/125 μ m (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively Maximum distance: <ul style="list-style-type: none">• 220 m (62.5 μm core diameter, 160 MHz/km bandwidth)• 275 m (62.5 μm core diameter, 200 MHz/km bandwidth)• 500 m (50 μm core diameter, 400 MHz/km bandwidth)• 550 m (50 μm core diameter, 500 MHz/km bandwidth)

Technical Specifications

<p>ProCurve 10-GbE X2-CX4 Transceiver (J8440B) 10-Gigabit X2 transceiver that supports a CX4 connector with distance of 15 m</p>	Ports	Connector: CX4 Duplex: full
	Dimensions (D x W x H)	3.54 x 1.42 x 0.53 in. (8.99 x 3.61 x 1.35 cm)
	Weight	0.18 lb. (0.08 kg)
	Environment	Operating temperature: 32°F to 131°F (0°C to 55°C) Operating relative humidity: 15% to 95% @ 149°F (65°C), non-condensing
	Cabling	Maximum distance: <ul style="list-style-type: none">• 15 m using CX4 cables• 300 m using optical media converters and multimode fiber cable
	Notes	Use CX4 10-GbE cable (0.5-15 m) or ProCurve 10-GbE CX4 Media Converter (J8439A).
<p>ProCurve 10-GbE CX4 Media Converter (J8439A) Optical media converter for CX4 (10G copper) mmf cable up to 300 m</p>	Ports	Duplex: full
	Cabling	Type: 12 fiber 62.5/125 μ m (core/cladding) diameter or 12 fiber 50/125 μ m diameter, multimode ribbon cable with MPO/MTP to MPO/MTP connectors
		Maximum distance: <ul style="list-style-type: none">• 62.5 μm multimode cable @ 150 MHz/km = 1-50 meters• 50 μm multimode cable @ 500 MHz/km = 1-100 meters• 50 μm multimode cable @ 2000 MHz/km = 1-300 meters
	Dimensions (D x W x H)	1 10-Gigabit Ethernet port (IEEE 802.3ae Type 10Gbase-ER 1550 nm serial optics)
	Weight	Connector: SC
	Environment	Duplex: full
<p>ProCurve 10-GbE X2-SC ER Optic (J8438A) Supports the 10G ER standard. Supports single-mode fiber up to 40 km.*</p>	Dimensions (D x W x H)	3.48 x 1.42 x 0.43 in. (8.84 x 3.61 x 1.09 cm)
	Weight	0.15 lb. (0.07 kg)
	Environment	Operating temperature: 32°F to 104°F (0°C to 40°C) Operating relative humidity: 15% to 95%, non-condensing
	Cabling	Type: Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1
		Maximum distance (single-mode): 30 km*
	Notes	Conditioning patch cord cables are not supported. * Maximum distance 40 km using engineered link.

Technical Specifications

ProCurve 10-GbE X2-SC Ports LR Optic (J8437A)	1 10-Gigabit Ethernet port (IEEE 802.3ae Type 10Gbase-LR 1310 nm serial optics) Connector: SC Duplex: full
10-Gigabit X2 transceiver that supports LR distance of 10 km with SC connector	Dimensions (D x W x H) 3.48 x 1.42 x 0.43 in. (8.84 x 3.61 x 1.09 cm) Weight 0.16 lb. (0.07 kg) Environment Operating temperature 32°F to 104°F (0°C to 40°C) Operating relative humidity 15% to 95%, non-condensing
	Cabling Type: low metal content, single-mode fiber-optic cables, complying with the ITU-T G.652 and ISO/IEC 793-2 Type B1 standards
	Notes Maximum distance: 9/125 μ m single-mode cable = 2 m–10 km Conditioning patch cord cables are not supported.

ProCurve 10-GbE X2-SC Ports SR Optic (J8436A)	1 10-Gigabit Ethernet port (IEEE 802.3ae Type 10Gbase-SR 850 nm serial optics) Connector: SC Duplex: full
Transceiver that supports 10G SR fiber standard; supports standard 50 μ and 62.5 μ mmf up to 300 m	Dimensions (D x W x H) 3.48 x 1.42 x 0.43 in. (8.84 x 3.61 x 1.09 cm) Weight 0.64 lb. (0.29 kg) Environment Operating temperature 32°F to 104°F (0°C to 40°C) Operating relative humidity 15% to 95%, non-condensing
	Cabling Type: 62.5 μ m (core/cladding) diameter or 50 μ m, 850 nm, low metal content, multimode fiber-optic, complying with the ITU-T G.652 and ISO/IEC 793-2 Type B1 standards
	Maximum distance: <ul style="list-style-type: none">• 62.5 μm multimode cable @ 160 MHz/km = 2–26 meters• 62.5 μm multimode cable @ 200 MHz/km = 2–33 meters• 50 μm multimode cable @ 400 MHz/km = 2–66 meters• 50 μm multimode cable @ 500 MHz/km = 2–82 meters• 50 μm multimode cable @ 2000 MHz/km = 2–300 meters

Technical Specifications

ProCurve Manager Plus 2.1 100-device limited version (J8778A) PCM+ provides advanced device management for 100 ProCurve devices, including integration with OpenView's Network Node Manager product.	Minimum processor	2.0 GHz Intel Pentium or equivalent
	Recommended processor	3.0 GHz Intel Pentium or equivalent
	Minimum memory	512 MB RAM
	Recommended memory	1 GB RAM
	Minimum disk space	5 GB free hard disk space
	Recommended disk space	10 GB free hard disk space
	Operating systems	Microsoft Windows XP Professional (SP1 or greater) Microsoft Windows 2000 Server (SP4 or later) Microsoft Windows XP (SP1 or greater) Microsoft Windows 2003 Server
	Browsers	Microsoft Internet Explorer version 5.0 or later
	Required/Supported platforms	HP OpenView Network Node Manager version 6.41 or 7.01 or 7.5
	Features	Device auto-discovery Topology and mapping Intuitive Explorer-style interface Usable troubleshooting data and alerts Device configuration and management Customize and execute policies across groups Enhanced network security features Multiple device configuration management and archiving Create and configure VLANs across the network Traffic monitoring and analysis Auto-configures traffic monitoring of inter-switch links Software updates with dual flash image support Modular design for add-in expansion E-mail/Pager alerts SNMP trap forwarding Granular event data via syslog support OpenView NNM integration
Additional requirements	Additional processing power may be necessary for extensive traffic monitoring	

Technical Specifications

ProCurve Manager Plus 2.1 unlimited license (J9009A)	Minimum processor	2.0 GHz Intel Pentium or equivalent
PCM+ 2.1 unlimited license provides a PCM+ license that does not limit the number of devices managed (It does NOT require the 100 device license).	Recommended processor	3.0 GHz Intel Pentium or equivalent
	Minimum memory	512 MB RAM
	Recommended memory	1 GB RAM
	Minimum disk space	5 GB free hard disk space
	Recommended disk space	10 GB free hard disk space
	Operating systems	Microsoft Windows XP Professional Microsoft Windows XP Microsoft Windows 2003 Microsoft Windows XP Professional (SP1 or greater)
	Browsers	Microsoft Internet Explorer version 5.0 or later
	Required/Supported platforms	HP OpenView Network Node Manager version 6.41 or 7.01 or 7.5
	RADIUS Server Support	Microsoft IAS
	Features	Device auto-discovery Topology and mapping Intuitive Explorer-style interface Usable troubleshooting data and alerts Device configuration and management Customize and execute policies across groups Enhanced network security features Multiple device configuration management and archiving Create and configure VLANs across the network Traffic monitoring and analysis Auto-configures traffic monitoring of inter-switch links Software updates with dual flash image support Modular design for add-in expansion E-mail/Pager alerts SNMP trap forwarding Granular event data via syslog support OpenView NNM integration
	Additional requirements	Additional processing power may be necessary for extensive traffic monitoring

Technical Specifications

ProCurve 620 Redundant/External Power Supply (J8696A)	Ports	2 redundant power supply ports	Restrictions: 195 W available per port
The ProCurve 620 Redundant/External Power Supply provides redundant system power and/or extra PoE power for up to two switches simultaneously.	Physical characteristics	2 external power supply ports	Restrictions: 398 W available per port
	Mounting	Dimensions (D x W x H)	15.4 in. x 17.4 in. x 1.73 in. (39.12 x 44.2 x 4.39 cm) (1U height)
	Environment	Weight	15.2 lb. (6.89 kg)
		Operating temperature	32°F to 131°F (0°C to 55°C)
		Operating relative humidity	15% to 95% at 104° F (40° C), non-condensing
		Non-operating/Storage temperature	-40° to 158° F (-40° to 70° C)
		Non-operating/Storage relative humidity	15% to 90% @ 149°F (65°C), non-condensing
		Altitude	10,000 ft.(3 km)
		Acoustic	LwA per ISO 7779: 54.2 dB
	Electrical characteristics	Max heat dissipation	400 BTU/hr (422 kJ/hr), for the actual 620 itself. PoE-powered device heat dissipation assumed to be outside the 620.
		Voltage	100-127 VAC/200-240 VAC
		Current	16 A/8 A
		Power consumption	1440 W
		RPS power	390 W
		PoE power	796 W
		RPS	12 V
		PoE	-50 V
		Frequency	50/60 Hz
		Notes	Above figures are for maximum RPS and EPS power being supplied to 2 switches simultaneously. 220 V power cords shipped with the 620 have a wall plug rated as close to 13 A as specific country standards allow.
	Safety Emissions	CSA 22.2 No. 60950; EN 60950/IEC 60950; UL 60950	
		FCC Class A; VCCI Class A; EN55022/CISPR-22 Class A	

Technical Specifications

Immunity	EN	EN55024/CISPR 24
	ESD	IEC 61000-4-2
	Radiated	IEC 61000-4-3
	EFT/Burst	IEC 61000-4-4
	Surge	IEC 61000-4-5
	Conducted	IEC 61000-4-6
	Power frequency magnetic field	IEC 61000-4-8
	Voltage dips and interruptions	IEC 61000-4-11
	Harmonics	EN61000-3-2, IEC61000-3-2
	Flicker	EN61000-3-3, IEC61000-3-3
Management	Unmanaged power supply; provides information via LEDs (LEDs repeated on front and back panel) or through port interfaces of attached devices	
Notes	The ProCurve 620 supports the ProCurve 2900 series(RPS), 3500yl series(RPS/EPS), and 6200yl (RPS) switches. The ProCurve 5400zl switches are not supported.	
	The ProCurve 620 includes 4 2-meter RPS/EPS cables. These cables can be used to carry either RPS or EPS power to the switch being powered.	

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